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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,274	07/13/2006	Vladimir Grouzdev	4786-3	5682
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EXAMINER				
KRISHNAN, VIVEK V				
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2445				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,274

Applicant(s)

GROUZDEV ET AL.

Examiner

VIVEK KRISHNAN

Art Unit

2445

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-8,11-13,15-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,11-13,15,16,18,19,21 and 23 is/are rejected.
- 7) ☒ Claim(s) 17 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to the Amendment/Arguments filed on November 25, 2008. Claims 1-3, 6-8, 11, 13, 15, and 17-19 have been amended. Claims 4, 5, 9, 10, 14, and 20 have been cancelled. Claims 21-23 have been added. Claims 1-3, 6-8, 11-13, 15-19, 21-23 are pending. Claims 17 and 22 are multiple dependent claims that depend on a multiple dependent claim and hence have not been considered further on the merits.

Response to Arguments

1. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 101 have been fully considered and are persuasive. The rejection of Claim 19 has been withdrawn.
2. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 102(b) have been fully considered but are moot in view of the new ground(s) of rejection.
3. Applicant's arguments with respect to Claim Rejections under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

As to Applicant's arguments with respect to amended Claims 1 and 18:

a. Applicant alleges that the claimed invention manages incoming and outgoing packets in one of the operating systems, and that, in contrast to Ratcliff, this first operating system has exclusive control of the management of incoming and outgoing data packets. Applicant alleges that the management of incoming and outgoing packets, as taught by Ratcliff, occurs outside the operating system partitions and that Ratcliff does not include any suggestion that such

management may be controlled by only one of the partitions. Further, Applicant alleges that there is no suggestion in Ronkka to manage incoming and outgoing packets in one of the operating systems only.

Examiner respectfully disagrees. First, the limitation "*code associated with the first operating system is arranged to receive all incoming data packets and to forward to the second operating system those packets which are not specifically for use by the first operating system or applications running thereon*", is *not* the equivalent to saying that the first operating system has exclusive control of the management of incoming and outgoing packets. In fact, Applicant's originally filed disclosure would not support such a claim. Furthermore, Ratcliff's disclosure (see column 4 lines 31-56) of code that is associated with the operating system partitions and responsible for forwarding incoming packets to the appropriate operating system partition, would sufficiently anticipate this recited limitation. However, in order to provide more explicit disclosure of this limitation, Ronkka's disclosure has been brought in.

Even assuming for the sake of argument that the above mentioned limitation can be taken to mean that the first operating system has exclusive control of the management of incoming and outgoing packets, Ratcliff, column 4 lines 31-56, discloses that the host to network interface is a software component that facilitates the network connection to the multiple operating system partitions and is part of the processor, thus providing reasonable suggestion to one of ordinary skill in the art that a single operating system partition may be responsible for the management of incoming and outgoing packets. In any case, the integration of any software (in this case, to manage incoming and outgoing packets) into an operating system would have been obvious to one of ordinary skill in the art at the time the invention was made. Furthermore, in view of

Ronkka's disclosure (see Abstract, column 9 lines 62-67, column 10 lines 1-17, column 11 lines 12-19, and column 14 lines 33-38) of a partitioned processor in a communication device in which one of the operating systems is responsible for mobile station functions, which involve incoming and outgoing data communication, and the other operating system is responsible for data processing functions, it would have been obvious to one of ordinary skill in the art to modify the disclosure of Ratcliff such that one operating system is assigned control of the management of incoming and outgoing packets.

Claim Objections

4. Claim 15, 17, and 22 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim serves as the basis for these multiple dependent claims. See MPEP § 608.01(n). Accordingly, although for the purposes of expediency, a rejection of Claim 15 (and Claim 16) has been provided below, Claims 17 and 22 have not been further treated on the merits.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 6-8, 11-13, 15, 18, 19, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,740,438 to Ratcliff et al. (hereinafter "Ratcliff") (IDS submitted January 30, 2006) and further in view of U.S. Patent No. 7,062,766 B2 to Ronkka et al. (hereinafter "Ronkka").

7. As to Claims 1 and 18, Ratcliff discloses a computer system and method (referenced hereinafter as the system) configured for communications, comprising:

- a processor (Ratcliff; column 1 lines 12-32; processor);

- a first operating system running on the processor (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; operating system partitions);

- a second operating system running on the processor (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; operating system partitions); and

- a network interface for communicating data (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; network interface),

wherein the first and second operating systems are arranged to share usage of the network interface (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; partitions share the use of the network interface);

the network interface operates using a single set of network logical addresses common to both operating systems (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; partitions share the use of network interface and set of network addresses).

Ratcliff does not explicitly disclose, however Ronkka discloses executable computer program code associated with the first operating system is arranged to receive all incoming packets, and to forward to the second operating system those packets which are not specifically for use by the first operating system or applications running thereon (Ronkka; Abstract, column 9 lines 62-67, column 10 lines 1-17, column 11 lines 12-19, and column 14 lines 33-38, column 15 lines 55-67, the real time operating system is solely responsible for communication over a network and forwards relevant messages to the normal operating system).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second operating systems, as disclosed by Ratcliff, to include code associated with the first operating system that is arranged to receive all incoming packets, and to forward to the second operating system those packets which are not specifically for use by the first operating system or applications running thereon, as disclosed by Ronkka, in order to provide a system where communication processes are handled in real time by a real time operating system while standard operations are handled by a general purpose operating system.

8. As to Claims 21 and 23, Ronkka discloses a computer system configured for communications, comprising:

- a processor (Ratcliff; column 1 lines 12-32; processor);

- a first operating system running on the processor (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; operating system partitions);

- a second operating system running on the processor (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; operating system partitions); and

a network interface for communicating data (Ratcliff; column 1 lines 12-32, column 2 lines 23-67; network interface),

wherein the first and second operating systems are arranged to share usage of the network interface (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; partitions share the use of the network interface);

the network interface operates using a single set of network addresses common to both operating systems (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; partitions share the use of network interface and set of network addresses), and

the first operating system comprises a transmission scheduler arranged to selectively forward outgoing data packets from the first and second operating systems for transmission through the network interface.

Ratcliff further discloses a transmission scheduler which is arranged to selectively forward outgoing data packets from the first and second operating systems for transmission through the network interface (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; forwarding outgoing packets from the multiple operating systems for transmission through the network interface).

Ratcliff does not explicitly disclose, however Ronkka discloses that the first operating system comprises a transmission scheduler arranged to selectively forward the outgoing packets (Ronkka; Abstract, column 9 lines 62-67, column 10 lines 1-17, column 11 lines 12-19, and column 14 lines 33-38, column 15 lines 55-67, the real time operating system selectively forwards outgoing data packets).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second operating systems, as disclosed by Ratcliff, to include code associated with the first operating system that is arranged to selectively forward outgoing data packets from the first and second operating systems for transmission through the network interface., as disclosed by Ronkka, in order to provide a system where communication processes are handled in real time by a real time operating system while standard operations are handled by a general purpose operating system.

9. As to Claim 2, Ratcliff and Ronkka disclose the system of Claims 1 and 21. Ronkka further discloses the first operating system is a real time operating system (Ronkka; abstract, column 9 lines 62-67, column 10 lines 1-17, column 15 lines 55-67, and column 16 lines 1-30, two operating systems on a processor and one is a real time operating system).

10. As to Claim 3, Ratcliff and Ronkka disclose the system of Claims 1 and 21. Ronkka further discloses the second operating system is a general purpose operating system (Ronkka; abstract, column 9 lines 62-67, column 10 lines 1-17, column 15 lines 55-67, and column 16 lines 1-30, two operating systems on a processor and one is a normal operating system).

11. As to Claim 6, Ratcliff and Ronkka disclose the system of Claim 21. Ronkka further discloses the transmission scheduler is arranged to give priority to the first operating system (Ronkka; abstract, column 9 lines 62-67, column 10 lines 1-17, column 15 lines 55-67, and column 16 lines 1-30, priority is given to the real time operating system).

12. As to Claim 7, Ratcliff and Ronkka disclose the system of Claim 21. Ronkka further discloses the system in which the transmission scheduler is arranged not to send any packets from the second operating system while there are packets for transmission from the first operating system (Ronkka; abstract, column 9 lines 62-67, column 10 lines 1-17, column 15 lines 55-67, and column 16 lines 1-30, tasks for the real time operating system are completed before tasks for the normal operating system).

13. As to Claim 8, Ratcliff and Ronkka disclose the system of Claims 1 and 21. Ratcliff further discloses a system which is arranged to communicate using Internet protocols (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35).

14. As to Claim 11, Ratcliff and Ronkka disclose the system of Claims 1 and 21. Ratcliff further discloses a system in which said first and second operating systems both operate on a single processor (Ratcliff; column 1 lines 12-32).

15. As to Claim 12, Ratcliff and Ronkka disclose the system of Claim 11. Ronkka further discloses an inter-operating system communications channel for carrying messages between said first and second operating systems, and/or applications running thereon (Ronkka; abstract, column 9 lines 62-67, column 10 lines 1-17, column 15 lines 55-67, column 16 lines 1-30, and column 27 lines 19-40, communication channel between first and second operating systems).

16. As to Claim 13, Ratcliff and Ronkka disclose the system of Claims 1 and 21. Ratcliff further discloses a system in which the first operating system has a first subset of address ports and the second operating system has a second subset of address ports, each said subset comprising at least one address port, said first and second subsets being mutually exclusive (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35, column 7 lines 5-65, partitions using different ports).

17. As to Claim 15, Ratcliff and Ronkka disclose the system of Claim 1. Ratcliff further discloses code for providing a real time data transmission channel for communicating data and associated control and/or supervisory signals, in which the code comprises:

first code operating under said first operating system for communicating said data (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; operating system communicating data over network); and

second code operating under said second operating system for communicating said control and/or supervisory signals (Ratcliff; column 1 lines 12-32, column 2 lines 23-67, column 3 lines 19-62, column 5 lines 53-67, column 6 lines 1-35; operating system communicating control information over a network).

18. As to Claim 19, Ratcliff and Ronkka disclose a computer-readable tangible storage media storing executable code for causing a computer to perform the method of claim 18 or 23.

19. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ratcliff and Ronkka as applied to Claim 15 above, and further in view of Computer Networks to Tanenbaum (hereinafter "Tanenbaum").

20. As to Claim 16, Ratcliff discloses each and every limitation of Claim 15. Ratcliff does not explicitly disclose, however Tanenbaum discloses a system in which the first operating system is arranged to use a UDP/IP protocol stack to communicate said data (Tanenbaum; 6.4 The Internet Transport Protocols: UDP).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify an operating system comprising a TCP/IP stack, as disclosed by Ratcliff, to include a UDP/IP stack, as disclosed by Tanenbaum, in order to include a connectionless protocol.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIVEK KRISHNAN whose telephone number is (571) 270-5009. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 276-9456. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice Winder/
Primary Examiner, Art Unit 2445

/V. K./
Examiner, Art Unit 2445

